Responses to Critique

1.1 Delete for this article.

1.2 Basic Fundamentals and Applications of Radar , Arnold E Acker, Varian Associates, Palo Alto Ca. October 1966 Foreword

1.3 Until the invention of the thermionic valve, electromagnetic waves were created by voice (telephone) or mechanical means. Thus frequencies were so low as to be unsuitable for radar technology. The thermionic valve allowed the creation of frequencies up to 1.6 megacycles for domestic radio transmission, and up to 25 Mcs for short wave transmission. This latter is at the very low end of the fruency spectrum suitable for radar transmissions.

1.4 As for 1.2

1.5 As stated in 1.3 above, radar requires high frequency (short wave length) electromagnetic transmission, achieveable at or above 25 Mcs.

1.6 I question the assertion “well ahead of any British ships”. Comparable yes. The British type 79 was introduced in 1938, and had a range of up to 60 NM. Remember also that the type 271, the first British radar using microwave technology (the magnetron invented in 1939), did not come into service until May 1941.

1.7 & 1.8 Delete all analogies.

2.9 Almost impossible to put a finite date, because of the different perceptions of the capability of the technology by people at the time and after. An acceptable date however would be November 1942 when the first Australian built device, the Type A272 completed satisfactory sea trials in *Kybra*.

3.10 A PRF of 500 was considered optimum. The higher the PRF, the greater the power dissipated at the antenna, and the greater the destructive effect of heat on the transmission components. The lower the PRF, the lower the accumulation of reflected energy with consequent less reliable target data.

4.11 Not sure why the question. Importance of sharing information or importance of the Yagi antenna, or what?

5.12 & 5 13. Will need to get hold of a copy of the book “Radar at Sea”, which Mike borrowed from his library in the city. I have tried the Council local libraries and Sydney State Library without success. The references to these two points are in that book.

5.14 See the opening statements in my article 741E, “Radar Types”

5.15 “It’s Nothing To Do With Me, I’m Radar”. PRH Watson ISBN 0 646 35899 5.

5.16 See attached copy of extract of “MOST SECRET” letter from ACW Merares, Engineer Captain 26/5/1939 to Navy Office re fitting of RDF to the RAN’s new Cruiser HMAS Perth.

5.17 & 6.18 As for 5.15, but pages 5 & 6

6.19. Just as well you queried this. STC manufactured much of the RAN communication equipment, and thermionic valves for use in radar, but no radar equipment. Radar was manufactured by AWA. So delete reference to STC. To respond to your question, Standard Telephones and Cables (STC) had its origins in the US company, Western Electric in 1895. By 1926 Western Electric was a giant that attracted the attention of the US Anti Trust laws, and was required to divest all of its manufacturing capability. This went to the company IT&T who then set up subsidiaries in many countries, all named Standard XXX ZZZ. The Australian operation was named Standard Telephone and Cables (Australia). Finally, STC (Australia) was sold to a French company Alcatel in 1985. Alcatel operates in Australia from HQ in Alexandria.

6.20 As for 5.15 but page 8

6.21 The Australian designed and built A272 was intended for use as surface warning of submarines and small craft. It had short wavelength (10 cm) and relatively low power giving it an effective range of 25 NM

6.22 Can’t locate the reference. I’ll keep looking

6.23 As for 5.15 but page 75

6.24 I think this must be an error given to me by a contributor. The only letter prefix which I can identify is “A” for Australian. So suggest delete the “E” prefix. Further to this, we’ll have to delete reference to Jake Kerr because his article (my file 741F) is not included in this new composite article

6.25 The Type 79 was one of the first sets introduced into the RN in August 1938. This operated in the High Frequency range of approximately 43 Mcs

6.26 See my article 741H. Of the 3 armed service, the RAN had the least number of Bailey Boys. Following the last course (Army only) completing in March 1944, the Bailey Boy program ceased operations totally.

6.27 What I am attempting here is a summary of radar types installed on all RAN warships up to cessation of hostilities, plus a few extra. Such extra are Kybra and Yandra because they were specially fitted for radar operator training, Sydney III for comparison purposes, and 3 of the “Q” class destroyers which were transferred to the RAN in October 1945 also for comparison.

This is one of my bones of contention with Mike. I gave him archives references to research in the hope of making this list complete. As it stands right now, it would seem to a reader that 22 of these ships had no radar, and that is certainly

not the case. All had radar. It is simply that up to now I have not found accurate relevant information to complete the list. I feel that this list must be completed.

Regarding your comment about excluding ships, it would be a big task to include every HDML and like vessel, so I focussed on the bigger ships.

6.28 I have included the letter subscripts to the class of vessel, simply for comparison purposes. For example, did all destroyers of all classes have the same radar installed?

6.29 Agree. See my file 741E . Here also I have a bit of a problem with missing facts, indicated by the symbol §. I think this is an esential file to include

8.30 Absolutely us. RG Menzies openly announced a declaration of war against Germany. Australia was not compelled to respond to German agression in Europe.

8.31 It was the trigger that caused the accelerated introduction of radar into the RAN, and in turn led to the creation of everything related to radar technology – design, manufacture, recruitment and training, supply logistics etc.

8.32 I stand corrected.

8.33 & 8.34 Again, this explains the reason for the introduction of the new branch of Wireless Mechanic in 1941. I have no concerns if you wish to delete it.

8.35 Thankyou, I'd be interested to see a copy.

9.36 Royal Australian Navy Radio Mechanics The HORMs, George Stevens, ISBN 0 9578877 1 X June 2005 Introduction page viii.

9.37 & 9.38 As for 9.36 but pages 15 &132

9.39 As for 9.36 but page 94

9.40 Director of Technical Staff Requirements

10.41, 10 42 & 10.43 Royal Australian Navy Radio Mechanics A History of the Torrens Era, George Stevens ISBN 0 646 12340 8 Introduction pages iii and iv, and pages 1 to 7 inclusive